



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,636	06/07/2000	Tue Nguyen	SIM013	8595
23910	7590	02/23/2005	EXAMINER	
FLIESLER MEYER, LLP FOUR EMBARCADERO CENTER SUITE 400 SAN FRANCISCO, CA 94111			KERNS, KEVIN P	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/589,636	Applicant(s) NGUYEN, TUE	
	Examiner Kevin P. Kerns	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 and 15-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (preamble of Jepson-type claims 33 and 34) in view of Finley et al. (US 5,799,509).

The applicant's admitted prior art (preamble of Jepson-type claims 33 and 34) discloses an improved high pressure chemical vapor trapping system operable to separate and collect elements of a chemical vapor exhaust, such that the trapping system includes (in upstream to downstream order): a vacuum pump, a hot trap, and a first cold trap. This general arrangement is disclosed and/or suggested in the applicant's claims of record, with the exception of (the improvement of) a second cold trap connected with and downstream of the first cold trap, as well as the arrangement of valves.

However, Finley et al. disclose a multi-component recovery apparatus and method, in which the apparatus includes providing a system that includes a plurality of consecutively arranged cold traps (low and high pressure cold traps that control the phase state of the components to be trapped, in a similar manner as temperature

control of the cold traps would achieve) and flow/isolation valves that control flow of components that are to be separated and/or recovered, such that the trapping apparatus is advantageous for selectively controlling separation and recovery of a plurality of components of varying physical properties within a vapor mixture (abstract; column 1, lines 5-17 and 50-67; column 2, lines 1-35 and 51-67; column 3, lines 1-67; column 4, lines 1-65; and Figure).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the high pressure chemical vapor trapping system operable to separate and collect elements of a chemical vapor exhaust, as disclosed by the applicant's admitted prior art (preamble of Jepson-type claims 33 and 34), by using the plurality of consecutively arranged cold traps and flow/isolation valves that control flow of components that are to be separated and/or recovered, as taught by Finley et al., in order to selectively control separation and recovery of a plurality of components of varying physical properties within a vapor mixture (Finley et al.; abstract; column 1, lines 5-17 and 50-67; column 2, lines 1-35).

3. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (preamble of Jepson-type claims 33 and 34) in view of Finley et al. (US 5,799,509) as applied to claim 1 above, and further in view of Kumada et al. (US 5,405,445).

The applicant's admitted prior art (in view of Finley et al.) disclose and/or suggest the elements of claim 1 above. Neither the applicant's admitted prior art nor Finley et al. discloses the use of a bias voltage and a catalyst.

However, Kumada et al. disclose a vacuum extraction system for a chemical vapor deposition (CVD) reactor vessel with a trapping device, in which the CVD apparatus 12 includes a reactor vessel 14 having first and second electrodes (16,18) through which an RF bias voltage is applied to cause a discharge therebetween (at a desired value and/or polarity depending on the amount of deposition and material of the substrate), while the system includes a trapping device 28 having a perforated tube member 78 that supplies a gaseous oxidizing agent (catalyst) of oxygen, water etc., such that active species formed by the discharge are deposited as a thin film in controlled amounts on the substrate, and to form oxides of deposition components, including oxides of silicon and titanium (abstract; column 1, lines 9-16 and 67-68; column 2, lines 1-68; column 3, lines 16-68; column 4, lines 1-68; column 5, lines 1-39; and Figures 1 and 2).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the high pressure chemical vapor trapping system operable to separate and collect elements of a chemical vapor exhaust, as disclosed by the applicant's admitted prior art (preamble of Jepson-type claims 33 and 34), by using the plurality of consecutively arranged cold traps and flow/isolation valves that control flow of components that are to be separated and/or recovered, as taught by Finley et al., in order to selectively control separation and recovery of a plurality of

Art Unit: 1725

components of varying physical properties within a vapor mixture, and by further using the RF bias voltage and oxidizing agent catalyst, as taught by Kumada et al., in order to form active species via the RF discharge voltage for depositing as a thin film in controlled amounts on the substrate, and to form oxides of deposition components, including oxides of silicon and titanium, respectively (Kumada et al.; abstract; column 3, lines 25-49; column 4, lines 60-68; and column 5, lines 1-39).

Response to Arguments

4. The examiner acknowledges the applicant's amendment received by the USPTO on November 26, 2004. The amendment overcomes prior objections to the specification and claims. The applicant's amendments/arguments overcome the 35 USC 103(a) rejections based on Schmitt et al. The applicant has added new claims 25-34, claims 33 and 34 of which introduce new admitted prior art into the application in the form of Jepson-type claim language in the preamble of claims 33 and 34 (see MPEP 2129). As a result, new grounds of rejection have been set forth in paragraphs 2 and 3 above. Claims 1-13 and 15-34 are currently under consideration in the application.

5. Applicant's arguments with respect to prior claims 1, 2, 4-8, 10-13, 15-17, 20, 22, and 23 (now claims 1-13 and 15-34) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,406,008 and US 6,800,254 (recently issued copending application) are also cited in PTO-892.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

Art Unit: 1725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns *Kevin Kerns 2/18/05*
Examiner
Art Unit 1725

KPK
kpk
February 18, 2005